

LIVER-SPLEEN with SPECT  
UPDATED: MARCH 2006

CPT CODE: 78215 Liver Spleen  
78205 Liver SPECT

**Indications:**

- Confirm presence of Kupffer cells (benignity) for lesions seen by other imaging modalities (e.g., focal nodular hyperplasia)
- Confirm presence of spleen (with SPECT and/or hepatobiliary scan, CPT Code 79223)
- Assess splenomegaly
- Assess diffuse hepatic disease
- Identify focal defects (cysts, metastases, abscesses, hemangiomas, etc.)
- Identify hepatic and splenic trauma

**Patient Prep:**

None.

**Scheduling:**

One hour patient time.

**Radiopharmaceutical**

**& Dose:**

Tc-99m-sulfur colloid 6 mCi +/- 20% (4.8-7.2 mCi). Dose will be adjusted for patient weight if  $\leq$  45 kg or  $\geq$  90 kg (refer to nomogram).

**Imaging Device:**

Gamma camera with LEHR collimator.

**Imaging Procedure:**

Anterior, Posterior, RAO ( $\pm$  LPO)  
R Lat & L Lat images  
Each 800 K counts at minimum  
SPECT liver tomo  
128 x 128 Matrix  
View angle = 6°  
30 seconds/stop

**Philips**

Reconstruction + display  
Use interactive reconstruction  
Use low pass filter  
2-pixel slice thickness

**Infinia**

Reconstruct using Oncology SPECT protocol  
Filter ~ Hanning 0.8  
2-pixel slice thickness

**Display:**

Soft copy of anterior, posterior, RAO, right lateral, and left lateral 800 K planar images.  
SPECT transaxial, sagittal, and coronal images displayed in 2-pixel slices.  
Filter ~ Hanning 0.8

**Interpretation:**

Abnormalities present as cold spots regardless of etiology (tumor, abscess, cyst, trauma, etc.).  
The scan can be performed in transplants where regional infarcts occur (wedge shaped).

Diffuse hepatic dysfunction is manifest with these signs appearing progressively as severity increases. Relative increase in size of left lobe of liver, generalized hepatomegaly, nonhomogeneous hepatic tracer distribution, increase in relative splenic uptake, increase in size

of spleen, increase in bone marrow uptake, increase in lung uptake and finally ascites (separation of liver and bone or lung activity) and decrease in size of liver.

**PACS:** Send planar and SPECT images to PACS.

**Comments:** A Nuclear Medicine staff or resident physician should be consulted to determine if additional views are indicated. Before the patient leaves, a Nuclear Medicine staff or resident physician should check scans to determine if format size needs to be changed.

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